

High Roller Part 1

Name(s): _____ score: _____

Write down necessary steps and answers clearly to earn full credit.



The “High Roller” ferris wheel in Las Vegas is the tallest observation wheel in the world. It stands 550 feet tall and is 520 feet in diameter. There are 28 passenger cabins that are spaced equally around the wheel. Each of these cabins is a spherical pod that measures 22 feet in diameter. One entire ride (one complete revolution) on the High Roller takes 30 minutes.

1. What is the angular velocity in radians per hour of a pod on the High Roller? Please give an exact answer, not a decimal approximation.
2. What is the linear velocity of a pod in miles per hour? Please round your answer to the nearest tenth. Use the fact that 5280 feet = 1 mile.
3. What is the length of the arc between two adjacent pods? Please round your answer to the nearest tenth.